

MILITARY SPECIFICATION SHEET

CABLES, RADIO FREQUENCY, FLEXIBLE COAXIAL,
50 OHMS, M17/156-00001

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for acquiring the cable described herein shall consist of this specification and the latest issue of MIL-C-17.

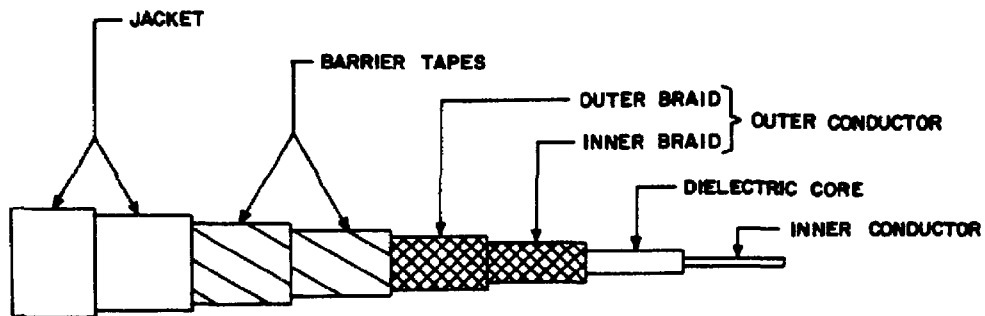


FIGURE 1. Configuration.

CAUTION IS DIRECTED TO THE APPLICATION OF THIS CABLE ABOVE 400 MHZ. ATTENUATION IS TESTED ONLY AT 400 MHZ. SRL AND POWER HANDLING CAPABILITIES ARE NOT STIPULATED HEREIN.

TABLE 1. Description.

Components	Construction details
Inner conductor	Solid, bare, copper wire. Overall diameter: .1019 inch \pm .0020.
Dielectric core	Type F-1: Solid, extruded PTFE. Diameter: .332 inch \pm 0.005.
Outer conductor	Double braid of bare, copper wire. Diameter: .414 inch maximum.
Inner braid	Gauge : AWG #33 Coverage : 97.7% nominal Carriers : 24 Ends : 10 Picks/inch: 5.4 \pm 10%
Outer braid	Gauge : AWG #34 Coverage : 91.1% nominal Carriers : 24 Ends : 8 Picks/inch: 10.6 \pm 10%
Barrier tapes	Type FF-2: Two wraps of PTFE tape, .005 inch thick each, by 1 to 1-1/4 inch wide. Each wrap of PTFE tape is to be applied with a 50% minimum overlap.
Jacket	Type V: Double braid. Diameter: .465 inch \pm .010.

ENGINEERING INFORMATION:

Continuous working voltage: 4,500 Vrms, maximum.

Velocity of propagation: 69.5 percent, nominal.

Operating temperature range: -55° to +200°C.

Inner conductor properties:

DC resistance (maximum at 20°C): 0.103 ohm per 100 feet.

Elongation: 15 percent, minimum.

Tensile strength: Not applicable.

Engineering note: This cable is useful in high temperature applications. (See connector series "HN" per MIL-C-3643.)

REQUIREMENTS:

Dimensions, configuration, and descriptions: See figure 1 and table 1.

Environmental and mechanical:

Visual and mechanical examination: Applicable.

Out-of-roundness: Not applicable.

Eccentricity: 10 percent, maximum.

Adhesion of conductors:

Inner conductor to core: 4 pounds, minimum; 30 pounds, maximum.

Aging stability: $+230^{\circ} \pm 5^{\circ}\text{C}$.

Stress crack resistance: Not applicable.

Outer conductor integrity: Not applicable.

Cold bend: Not applicable.

Dimensional stability: $+250^{\circ} \pm 5^{\circ}\text{C}$.

Inner conductor from core: 0.250 inch, maximum.

Inner conductor from jacket: 0.312 inch, maximum.

Contamination: Not applicable.

Bendability: Not applicable.

Flammability: Applicable.

Weight: 0.240 pound per foot, maximum.

Electrical:

Continuity: Applicable.

Spark test: Not applicable.

Voltage withstanding: 12,000 Vrms, minimum.

Insulation resistance: Not applicable.

Corona extinction voltage: 6,000 Vrms, minimum.

Characteristic impedance: 50 ± 2 ohms.

Attenuation: 4.5 dB/100 ft maximum at 400 MHz.

Structural return loss: Not applicable.

Capacitance: 29.3 pF per foot, maximum.

Capacitance stability: Not applicable.

Capacitance unbalance: Not applicable.

Transmission unbalance: Not applicable.

Phase stability: Not applicable.

Mechanically induced noise voltage: Not applicable.

Time delay: Not applicable.

Part number: See table II.

Supersession data: See table II.

TABLE II. Cross reference of part number.

Part number	Superseded part number
M17/156-00001	RG-119/U per MIL-C-17D

Custodians:

Army - CR
Navy - EC
Air Force - 85

Preparing activity:

Army - CR

(Project 6145-0814-2)

Review activities:

Army - MI
Navy - SH
Air Force - 11, 17, 99
DLA - ES, IS

User activities:

Army - AR, AT, ME
Navy - AS, MC, OS
Air Force - 19

Agent:

DLA - ES